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Socially advantaged? How social affiliations influence access to valuable service professional transactions

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Abstract

Research summary: This article theorizes that social capital produced by social affiliations allows service professionals to gain access to higher-value transactions through increased reputation for trustworthiness, which then aids them in further building reputation and engaging in entrepreneurship. Using a unique approach that pairs Utah residential real estate data with church congregation boundaries, we find that affiliations enable real estate agents to list 14% more expensive homes, and to consequently build reputation useful for future nonaffiliated transactions. We observe large reputation-building benefits for early-career agents, particularly for agents in low-reputation firms. Strikingly, we find this lowers entrepreneurship entry by 6%. These results imply that social affiliations can substitute for reputation in selection, enabling professionals to build reputation, which then has important career implications.

Managerial summary: This article explores how social relationships between real estate agents and home sellers influence the value of transactions agents engage in. Sellers increasingly trust agents with whom they share a social affiliation, which allows agents to better secure high-value listings and build reputation. This benefits agent in securing future valuable transactions with non-affiliated clients. Using residential real estate data and

Real estate listing data were provided courtesy of the Wasatch Front Regional Multiple Listing Service (WFRMLS). WFRMLS has not reviewed or verified any of the numbers or statistics in this article.

geographically assigned church congregations, we find that agents list 14% more expensive homes when listing for affiliated clients, and that this builds agent reputation significantly faster than listing for nonaffiliated clients. Interestingly, we find listing for affiliated clients reduces future entrepreneurship 6%. Our study suggests that service professionals can leverage social affiliations to build reputation that helps them establish clientele and improve performance.

KEYWORDS

entrepreneurship, human capital, professional services, reputation, social capital

1 | INTRODUCTION

Transaction volume and value are both crucial to firm performance. In human capital-intensive industries, such as professional services, providers face challenges increasing transaction volume and value. Consumers ultimately desire to engage with trustworthy and high-ability providers, yet differentials in expertise between consumers and providers as well as difficulties monitoring and evaluating provider quality create potential for agency problems. These information asymmetries may even persist *ex post* (Darby & Karni, 1973; Dulleck & Kerschbamer, 2006; Dulleck, Kerschbamer, & Sutter, 2011), making evaluation of trustworthiness and ability difficult. Reputation is the most common way for providers to overcome these challenges, but usually requires several transactions to establish, and *ex post* information asymmetries make signals from reputation (or other available proxies) noisy. In such cases, scholars have found that consumers increasingly rely on social capital to choose transacting partners (DiMaggio & Louch, 1998; Elfenbein & Zenger, 2013; Greif, 1993; Gubler, 2019; Hoetker, 2005; Yenkey, 2018), as it reduces agency concerns (Adler & Kwon, 2002; Coleman, 1990; Portes, 1998). While strategic theory shows that social capital influences the selection process in favor of socially connected partners (i.e., increases volume), it remains unclear how it affects the characteristics of transactions providers engage in—foremost among them transaction value.

In this article, we explore the extent to which the social affiliations of service professionals (which we define as common memberships between individuals in formal social institutions) impact transaction value, reputation-building, and the decision to enter into entrepreneurship. Our work relates to and extends previous work on the economic impact of social capital (e.g., Adler & Kwon, 2002; Ody-Brasier, 2018; Uzzi & Lancaster, 2004; Yenkey, 2018), as well as investigations into the links between social and human capital (e.g., Byun, Frake, and Agarwal, 2018; Byun, Raffiee, and Ganco 2018; Coleman, 1988; Gubler, 2019; Mawdsley & Somaya, 2016).¹

¹Readers familiar with Gubler (2019) will likely find similarities between this paper and that one. Both deal with the influence of social affiliations in professional services, but there are key differences. This article focuses on how social affiliations influence *ex ante* transaction value, allowing professionals to engage in high-value transactions, which then builds reputation and influences entry into entrepreneurship. That paper focuses on how social affiliations influence *ex post* transaction performance, taking transaction value and characteristics as given, without any implications for reputation or entrepreneurship.

We argue that social affiliations substitute for a reputation for trustworthiness, which allows professionals to engage in higher-value transactions with affiliates. Increased average transaction value in turn builds reputation for ability, which provides professionals greater access to valuable future nonaffiliated transactions. We focus mainly on early-career professionals for whom reputational signals have the largest impact (Livingston, 2005), and expect affiliations to confer large reputation-building benefits for this group. Due to the potential for firm reputation to overshadow individual reputation, we anticipate affiliations to offer a particularly large relative benefit for early-career professionals in low-reputation firms. Finally, we argue that reputation building from social affiliations will lead to increased entry into entrepreneurship.²

We test our theory by pairing novel data from geographically assigned church congregations in Utah County, Utah with real estate transaction data from a Utah multiple listing service (MLS). Nearly 90% of the over one-half million residents of Utah County report being members of the Church of Jesus Christ of Latter-day Saints (ASARB, 2010). This church geographically assigns each home in the county to a congregation which church members attend. These assignments significantly impact not only social interactions between individuals (Embry, 2001) but also agent performance in transactions (Gathright, 2010; Gubler, 2019). We examine for real estate agents in our sample whether social affiliations in the form of shared congregational assignments (rather than shared religion) impact transaction value, building of reputation, and career decisions.

Using multiple models, we find a strong, robust correlation between listing value and the presence of a social affiliation. Homes list at 14% higher prices when affiliations are present between listing agents and clients, and the average agent lists homes for 14% more when listing for affiliates compared to nonaffiliated listings. Consequently, agents increase their average commissions earned by approximately \$1,077. These results do not reflect the effect of affiliation on the choice of initial listing price; rather, they indicate the homes listed for affiliates are worth more than nonaffiliate listings. Additional analyses find that these effects increase with affiliation strength, are not impacted by agent experience, and are persistent across the entire listing price distribution.

We also find novel evidence suggesting that affiliations aid reputation building. Our results imply that for an early-career agent the impact on future home list price from an additional affiliate transaction is over four times that of an additional nonaffiliate transaction, suggesting these higher-value transactions are useful in building reputation. This effect is particularly large for early-career agents in low-reputation firms. Finally, contrary to our theory, we find that listing for an additional affiliate is associated with a 6% *decrease* in entrepreneurship, as measured by the hazard that an agent becomes a new real estate broker. In post hoc analysis we suggest this unexpected result may be driven by volume concerns and the nonrepeated nature of transactions in our setting.

These results have important theoretical implications. First, they contribute to a growing literature that seeks to tease apart social mechanisms from human capital and other factors (e.g., Byun, Frake, and Agarwal, 2018; Byun, Raffiee, and Ganco, 2018; Elfenbein & Zenger, 2013; Gubler, 2019; Hoetker, 2005; Mawdsley & Somaya, 2016; Ody-Brasier, 2018). Our results suggest that social capital external to economic transactions can both substitute for reputation and be drawn on to build reputation in markets with incomplete information. We focus specifically on reputation-building from

Empirically, while the approach is similar, this article uses a different dependent variable, a different data subsample, different independent variables, and different control variables, resulting in significantly different models and results. Thus, the papers are related but distinct.

²While the entrepreneurship decision may not seem to naturally follow from reputation-building, the agency and other information asymmetry problems inherent in professional services make reputation of paramount importance in the entrepreneurship decision, which is driven in part by how well the potential entrepreneur trusts his or her reputation to sustain a professional services firm.

increased transaction value, which has not received significant attention in the literature (especially compared to transaction volume). Second, we add theory and empirical evidence to Adler and Kwon's (2002) argument that the value of social capital is contingent on the resources to which it provides access. In our case, social capital provides access to valuable transactions, which then facilitates reputation building. Third, our results add to the growing body of work investigating how early-career events and decisions impact worker careers (Briscoe & Kellogg, 2011; Chattopadhyay & Choudhury, 2017; Sørensen, 2004). Finally, our results contribute to the literature on social capital and entrepreneurship, showing the nonintuitive result that in some cases social capital is associated with less entrepreneurship. This contrasts with recent research, which largely finds positive effects for social capital on entrepreneurship (e.g., Byun et al., 2018; Putnam, 2001; Stuart & Ding, 2006).

2 | THEORETICAL BACKGROUND

We focus on professional services, an economically important, ubiquitous, and human capital-intensive industry (Teece, 2003) that includes healthcare, legal services, consulting, real estate, and financial services. Without a tangible product to examine, consumers of professional services often face difficulties judging quality and trustworthiness among potential providers. Information asymmetries, a lack of expertise, and monitoring difficulties restrict consumers from assessing professional performance on these dimensions. This difficulty is exacerbated by the credence good aspect of such settings, where even *ex post* incomplete information prohibits consumers from accurately assessing the quality of the service they received (Dulleck & Kerschbamer, 2006).

The result of information asymmetries and expertise differentials in credence goods markets poses significant potential for hidden professional action (commonly referred to as moral hazard) as well as hidden professional quality (adverse selection; see Zenger & Gubler, 2016). Consumers ultimately desire trustworthy professionals to avoid problems associated with moral hazard and high-ability professionals to avoid adverse selection. Without objective and evaluable historic performance information, consumers are unable to resolve these issues through searching the market.

2.1 | Reputation as a potential solution to agency problems

In the absence of reliably objective and evaluable performance information, consumers must rely on other signals of trustworthiness and ability. Reputation is foremost among these signals and is based on an actor's previous behavior, often viewed in the context of competitor behavior (Basdeo, Smith, Grimm, Rindova, & Derfus, 2006; Clark & Montgomery, 1998; Weigelt & Camerer, 1988). Reputation is built through repeated interactions or through information disseminating through social networks (Huck, Lünser, & Tyran, 2010, 2012) or through markets generally (Fombrun & Shanley, 1990; Rao, 1994). Reputation also exists at multiple levels, including the individual or firm level. When information is incomplete, reputation can lead to increased access to transactions as it provides signals that reduce agency concerns (e.g., Banerjee & Duflo, 2000; Dulleck et al., 2011; Fombrun, 1996; Shapiro, 1983).

Yet while reputation is typically correlated with professional quality, its proxy value can be limited. Reputation is inherently noisy in credence goods markets, as it is based on consumer judgments that can be biased and inaccurate even in the absence of expertise differentials. Moreover, reputation may only provide information about certain aspects of provider performance (e.g., ability), while leaving other aspects unclear (e.g., trustworthiness). Expertise differentials found in credence goods markets exacerbate these problems, making it difficult for consumers to compare reputation between

professionals or to judge the extent to which a professional's knowledge and skills apply to other transactions. Reputation also requires many transactions to provide confidence regarding quality, which places entrant providers at a considerable disadvantage. Thus, while reputation provides helpful information to consumers, it is inherently a noisy and limited signal, and still may not resolve consumer agency concerns (Darby & Karni, 1973; Dulleck et al., 2011).

2.2 | Social capital as a solution to agency problems

Given incomplete information and the challenge of interpreting reputation signals, consumers may choose to rely on social capital in transactions (DiMaggio & Louch, 1998; Elfenbein & Zenger, 2013; Greif, 1993; Gubler, 2019; Hoetker, 2005; Yenkey, 2018). Social capital is defined by “the ability of actors to secure benefits by virtue of membership in... social structures” (Portes, 1998, p. 6). It acts as a valuable resource in transactions by activating both social mechanisms (Adler & Kwon, 2002; Coleman, 1988) and in-group preferences (Ashforth & Mael, 1989; Falk & Zehnder, 2007; Tajfel, Billig, Bundy, & Flament, 1971), which lead to increased trust, information, and motivation.

We focus on social affiliations, a ubiquitous source of social capital that has not received much formal attention even though anecdotes illustrating its importance to market transactions abound.³ We define social affiliations as current shared memberships in formal social institutions (including churches, alumni organizations, corporations, clubs, charitable organizations, and schools) through which individuals interact and experience common identity, norms, and values (Gubler, 2019). Coleman (1988) described such organizations as “appropriable,” as the relationships members form are often used for additional purposes distinct from that for which they were founded.

Social affiliations create potential for (at least) two types of social capital: relational capital and structural social capital. Relational capital refers to the trust, respect, and friendship created as individuals interact (Kale, Singh, & Perlmutter, 2000), leading to relationships that are rich in shared values, norms, and obligations which can then be leveraged for individual benefit, including in economic transactions (Adler & Kwon, 2002; Byun et al., 2018). Structural social capital refers to benefits that inhere from network connections (Nahapiet & Ghoshal, 1998). Individuals with shared memberships in social organizations need not know each other to benefit from affiliations, as they share common friends and acquaintances and tend to have a positive bias toward in-group individuals (e.g., Ashforth & Mael, 1989; Falk & Zehnder, 2007; Tajfel et al., 1971). This bias can extend to the businesses consumers patronize and the terms under which they transact (Cruz, Beck, & Wezel, 2017; Liu & Wezel, 2014; Ody-Brasier, 2018; Porac, Thomas, Wilson, Paton, & Kanfer, 1995; Weber, Heinze, & DeSoucey, 2008).

In markets where information is incomplete, social affiliations can play a particularly important role in helping consumers judge among candidate service providers, and both relational and structural social capital contribute to this role. Affiliations ultimately lead to increased trust, improved information flows, and higher levels of professional motivation. Trust and motivation benefits stem from the social structure, as professionals seek to maintain social reputation and avoid social punishments (Adler & Kwon, 2002; Coleman, 1990; Granovetter, 1985), as well as from social and in-group preferences (Ashforth & Mael, 1989; Ben-Porath, 1980; Billig & Tajfel, 1973; Tajfel et al., 1971) or from friendship and goodwill from previous interactions (Geertz, 1963; Greif, 1993; Kale et al., 2000; Podolny, 1994; Uzzi, 1997). Information benefits stem from increased sharing of private, tacit, and fine-grained information (Coleman, 1988; Lin, 2017; Reagans & McEvily, 2003; Uzzi,

³Coleman's (1988) descriptions of the wholesale diamond market in New York and of Korean student activists.

1997), as well as from knowledge sharing that occurs through geographic proximity or repeated interactions (Agrawal & Goldfarb, 2008; Bidwell & Fernandez-Mateo, 2010; Catalini, 2017; Ody-Brasier, 2018; Reuer & Lahiri, 2014; Singh & Marx, 2013).

Through these benefits, affiliations provide consumers significant assurances regarding professional trustworthiness, reducing moral hazard. This can lead consumers to prefer transacting with affiliates, as they expect affiliates to work harder and behave less opportunistically than nonaffiliates (DiMaggio & Louch, 1998; Gubler, 2019). Affiliations may similarly influence consumer search behaviors and reduce search costs under incomplete information (Gubler, 2019; Rogan & Sorenson, 2014), leading consumers to consider smaller choice sets, to act on social preferences when selecting partners (Baker & Faulkner, 2004; Fairfax, 2001; NASAA, 2001; Yenkey, 2018), and to rely on the expected value added to the transaction from increased trustworthiness.

2.3 | Social capital and transaction value

For service professionals hoping to engage in valuable transactions with clients, social affiliations therefore serve as a proxy for a reputation for trustworthiness. As noted above, this reputation for trustworthiness naturally provides additional opportunities to transact, highlighting how social capital benefits providers by increasing transaction volume. Yet the effect of social capital on transaction value has been relatively neglected, despite being an important feature of transactions—particularly in professional services, where providers seek to provide the most profitable services. This can lead to situations in which service professionals engage in behaviors that benefit them at the expense of the customer, such as when unnecessary medical or dental procedures are performed, unnecessary auto repairs are provided, financial clients are encouraged to pursue overly risky investments or legal clients are overbilled. Such situations indicate that the importance of trustworthiness increases with transaction value, as the incentive for opportunistic behavior also increases.

The motivation to pursue valuable transactions can also impact provider behavior before a client is contracted. Higher-value transactions are especially important to professional performance, making competition to secure them especially intense. Thus, providers will exhaust all possible resources to secure such business. Because of the increased trustworthiness associated with social affiliation, we expect that providers will be more likely to leverage affiliations to attract clients as transaction value increases. Together, these mechanisms suggest that social affiliations provide professionals improved access to valuable transactions, regardless of human capital or experience. Our first hypothesis builds on but extends previous work that has investigated the role of social capital in increasing transaction volume (e.g., Gubler, 2019) by making the following prediction about transaction value:

Hypothesis 1: *Service professionals will engage in higher-value transactions with socially affiliated clients than with nonaffiliated clients.*

2.4 | Building reputation through social affiliations

While social affiliations provide consumers helpful information regarding professional trustworthiness, they provide only limited insight into professional ability and the adverse selection problem (Gubler, 2019). Reputation for ability accumulates over time as service professionals demonstrate high performance across multiple transactions. In particular, a high average transaction value

indicates that a professional is capable of providing work of sufficient quality to justify the cost. All else equal, a reputation for ability leads to increased access to valuable future transactions.

From the client's perspective, trustworthiness and ability are both important, and consequently, signals of each will be used in choosing a provider. When a seller does not have the option of relying on social affiliation as a signal for trustworthiness, the ability signal will increase in importance. When a client does have the option of choosing a social affiliate and decides to transact with a non-affiliate, it is likely because the latter has built a reputation for ability through valuable transactions that warrant this selection. In either case, the implication is that a history of valuable transactions will be associated with valuable current nonaffiliate transactions via the reputation signals it provides.

In markets characterized by incomplete information, entrants are at a significant disadvantage, as they have spent significantly less time interacting with partners than incumbent competitors. With less time to build reputation, they have less access to valuable transactions, which in turn are needed to build reputation for ability. Yet this reputational disadvantage can be overcome through transacting with affiliates, as professionals draw on the reputation for trustworthiness proxied thereby to gain access to valuable transactions. Entrants can then leverage these higher-value transactions from affiliations to establish track records of performance, building reputation for ability that acts as a signal of quality to all potential consumers. Because affiliate transactions are higher-value on average than nonaffiliate transactions, they are more valuable on average in building reputation for ability.

Thus, as social capital substitutes for professional reputation in the selection process, it also can be used to build reputation for ability, which then influences future transactions with nonaffiliated consumers. This is particularly important to professionals when reputation information is sparse, such as for new entrants. For example, Livingston (2005) found that early reviews for eBay sellers had a significant impact on seller reputation, while subsequent reviews had much lower marginal impacts. Thus, we expect that transactions with affiliates early in a professional's career will lead to greater reputation-building benefits than transactions with nonaffiliates. Our second hypothesis follows:

Hypothesis 2: *Early-career transactions with social affiliates will contribute more strongly to building service professional reputation for ability with nonaffiliates than early-career transactions with nonaffiliates.*

In addition to individual reputation, firms also play an important role in signaling quality and reducing consumer agency concerns. Individual service professionals can often draw on firm-level reputation to improve transaction performance (e.g., Benjamin & Podolny, 1999; Fombrun, 1996; Roberts & Dowling, 2002; Shapiro, 1983). While firm reputation is less likely to resolve consumer concerns regarding professional trustworthiness, given the *ex post* difficulties in evaluating performance, firm reputation can provide significant information regarding professional ability. Professionals at high-reputation firms are typically judged to be of higher ability than those at lower-reputation firms (e.g., Benjamin & Podolny, 1999; Bidwell, Won, Barbulescu, & Mollick, 2015; Podolny, 1993). Moreover, consumers may anticipate that professionals at high-reputation firms have additional access to resources which will improve their performance. However, because access to resources and valuable transactions is tied to the firm, the reputational benefits derived therefrom may not fully transfer to the individual professionals who conduct the transactions.

Since professionals in low-reputation firms do not enjoy the same benefits in accessing valuable transactions, they face barriers to reputation-building early in their careers. Social affiliations provide an alternative avenue through which professionals can overcome this disadvantage. Because these professionals do not rely on firm-level reputation, the reputational benefits from affiliate transactions

are more likely to accrue to them individually rather than to the firm. Thus, transacting with affiliates has a higher impact on individual reputation for ability for early-career professionals in low-reputation firms, compared to professionals in high-reputation firms. Our third hypothesis follows:

Hypothesis 3: *Early-career transactions with social affiliates will contribute more strongly to building service professional reputation for ability with nonaffiliates for professionals in low-reputation firms than for professionals in high-reputation firms.*

2.5 | Social affiliations, reputation, and entrepreneurship

The preceding discussion makes clear that, in spite of the difficulties associated with interpreting it, reputation is of paramount importance in credence good industries. Service professionals depend on reputation to build their clientele, and service professional firms which cannot maintain a strong reputation find themselves in serious danger of exit. Because of the overarching importance of reputation in these industries, the entrepreneurial decision in its essence reduces to whether the service professional believes that his or her reputation is strong enough (or will become so) to allow the potential new venture to grow and thrive. In professional services, pecuniary motivations for entrepreneurship are found in the benefit of claiming an increased share of the profit generated outweighing the benefits from reduced risk and overhead cost in employment (Gilson & Mnookin, 1984; Morris & Empson, 1998). Entrepreneurs must be confident that the increased profit share they generate on their own is sufficient to outweigh the increase in overhead costs associated with leaving a firm, and this is largely determined by the strength of their reputation.

Potential entrepreneurs must consider their ability to mobilize complementary resources to generate this profit (Campbell, Ganco, Franco, & Agarwal, 2012; Teece, 2003). In human-capital intensive industries, professional reputation and social capital are key resources and thus important determinants of this decision. In particular, the reputational benefits of social affiliations and the ability of service professionals to leverage prior relationships and personal reputation to “take clients with them” into new ventures is crucial to anticipating entrepreneurial success (Campbell et al., 2012; Raffiee, 2017). Social capital in such settings can similarly benefit by providing positive reinforcement about the professional's ability to serve clients and maintain relationships (Kim, 2018). Thus, social affiliations and the reputation derived therefrom should increase a potential entrepreneur's expectation of the profit he or she can generate in entrepreneurship. This leads to our final hypothesis:

Hypothesis 4: *Service professionals with more affiliate transactions will be more likely to engage in entrepreneurship than service professionals with fewer affiliate transactions.*

3 | EMPIRICAL SETTING

The setting for this study is the residential real estate industry. We focus on listing agents as providers of credence goods and the relationship between listing agents and their clients, home sellers. To sell real estate in Utah, agents must belong to a licensed brokerage that oversees their work. The typical brokerage in our sample employs 23 unique agents per year, with the largest employing 178 agents and the smallest just one (self-employed). Forty-three percent of the listings in our sample

are by nationally franchised brokerages, such as RE/MAX, Coldwell Banker, or Prudential; 49% are by independent brokerages; and 8 % are by self-employed brokers. Franchised brokerages are typically larger, employing a median of 36 unique agents per year. Because brokerage revenue is directly influenced by agent ability, and particularly by the number and value of homes agents sell, it is of paramount importance for brokerages to identify, hire, and retain high-performing agents. Agent performance is similarly driven by the number and value of homes they sell, as they are normally compensated 3% of the final list price, which is then split with their employing brokerage.

Sellers use real estate agents for a variety of reasons. First, agents have expertise in interpreting market information that sellers lack, and it is costly for sellers to conduct independent market research. Second, agents have access to potential buyers through professional networks, potentially facilitating faster sales at higher prices. Third, agents have valuable experience pricing homes. Given the economic magnitude of the transaction and the potential emotions involved, this helps sellers have confidence in list and sell prices. Fourth, agents have experience marketing homes and can provide advice that reduces time on market and increases the sale price of the home. This includes insight into the buyer's mentality, such as how best to present or stage a home to attract buyers, and which aspects of the home could be improved to lead to a higher price. Finally, agents help sellers navigate the closing process, including filling out necessary paperwork. These benefits potentially increase probability of sale, increase final sale prices, decrease time on market, and reduce stress and costly errors.

However, using a real estate agent creates potential agency problems for sellers. Because the information which agents share with sellers about competing agents, comparable homes, and the market is difficult to verify, agents have incentive to use their expertise advantage to engage in opportunistic behaviors. In particular, listing agents may push sellers to underprice homes and sell them too quickly (Hendel, Nevo, & Ortalo-Magné, 2009; Jia & Pathak, 2010; Levitt & Syverson, 2008; Rutherford, Springer, & Yavas, 2005). Such behavior stems from the financial incentives faced by agents. For instance, while the difference between selling a home for \$300 K and \$315 K is approximately \$15,000 for the seller, for the listing agent—after splitting the final commission between agents and with all brokerages—this translates into a difference of about \$243.⁴ Sellers similarly have limited information about an agent's true ability, as previous performance information is hard to evaluate and largely unavailable.

3.1 | Social affiliations created through geographically assigned church boundaries

In the face of these uncertainties and the risk for opportunism, sellers may opt to use agents with whom they share social ties, regardless of experience or professional reputation. To identify social affiliations, we draw on data from geographically assigned congregation boundaries for Utah County, Utah, for the Church of Jesus Christ of Latter-day Saints (LDS). Approximately 89% of the 516,654 Utah County residents report being LDS (ASARB, 2010; US Census Bureau, 2010). These boundaries significantly influence social interactions and friendships between individuals (Embry, 2001; Gathright, 2010; Gubler, 2019). We gathered church boundary assignments for every home listed in the Utah County assessor files for both 2008 and 2014. Each assignment includes a “ward” assignment (the congregation attended on a weekly basis) as well as a larger “stake” assignment (similar to a Catholic diocese). Wards are nested within stakes, and the typical stake contains seven wards and covers approximately three-square miles of land. Church members attend many weekly meetings and

⁴This assumes a 50/50 split with buyer agent, a 60/40 split with employing brokerage, and a 6% franchise fee.

activities with ward members, and large conferences, training events, or activities at the stake level. In Utah County, there were 147 stakes and 961 wards in 2014. The average ward has 450 members and 154 housing units; the average stake has 3,000 members and 1,081 housing units.

Church congregations define an important social structure for Utah County residents yet are geographically assigned and determined by leaders without meaningful influence from members. Thus, they provide a unique setting to investigate the impact of affiliations on the types of homes agents list. Moreover, the small size of boundaries, as well as their irregular shapes, allows us to control for geographical distance, socioeconomic factors inherent in areas, and other potential confounds that may influence the results (e.g., Mouw, 2006). Social relationships are strongest at the ward level, as members interact weekly through church meetings, other church responsibilities, and various activities. Social relationships are weaker for the larger stake units, yet still more frequent than social interactions between individuals that do not share a stake (see Gubler, 2019). Our discussions with church members in Utah County indicated that members often feel there is little time available to spend interacting with individuals outside church boundaries.

4 | DATA

The core dataset originates from a large multiple listing service (MLS) in Utah County. Most agents in Utah County rely on this MLS to list homes, as it is the primary MLS operating in Utah and consequently the primary repository of information on current and previous listings. The MLS requires agents to enter listing data within 5 days of the listing agreement and to update listing information within 10 days of sale. It also has safeguards in place to ensure data are entered correctly. The MLS data include housing characteristics, agent and brokerage information, and variables related to the transaction, including original listing price and final sale price.

We collected data from the MLS on all listings in Utah County from 1998 to 2014. We then paired these data with agent licensing information maintained by the Utah Division of Real Estate. Together, these data allow us to match brokerages, agents, and listings, and to observe all transactions agents engage in over time. They also allow us to identify agent home addresses and consequently to construct a measure of linear distance between each agent-home pair in the sample. To control for the impact of geographical distance, zip codes and latitude and longitude were collected for each home.⁵ Geographic data allow us to measure the distance between each agent-home pair, and to control for demographics and other geographic unobservables.

4.1 | Church boundary data

Snapshots of church boundaries were collected in 2008 and 2014 for all homes in Utah County.⁶ Because these data are not available continuously throughout time, we constructed a panel of geographic boundaries using snapshots of all boundaries in both 2008 and 2014, as well as stake boundary change dates collected through online news releases and related websites. These data allow us to identify listing agents and home sellers that share a social affiliation through the geographically assigned boundaries of the church for the majority of homes in our sample.

⁵These data were gathered online through Geocoder.us, the US Census Bureau, and the Google geocoding service.

⁶2008 data were collected by Gathright (2010) to investigate the impact of affiliations on word-of-mouth learning.

4.2 | Data construction and cleaning process

The data were constructed by merging MLS data with Utah Division of Real Estate licensing data, Utah County Assessor and Recorder data, church boundary data, and finally with distance and geographic data. The sample originally included all listed homes from 1998 to 2014. However, we restrict the data in three meaningful ways. First, we drop the top and bottom 1% of observations by list price. This allows us to focus on similar homes and omits unique outliers. Second, we drop one agent from the sample that listed and sold significantly more homes than any other agent, as it appeared to be an error. Our results are robust to including these data. Finally, we dropped observations for agents whose first listing was before 1998.⁷ This allows us to accurately measure agent experience as it excludes agents from the sample who had been selling homes previous to 1998.

These restrictions leave us with 45,841 observations. Because this study focuses on the initial listing price, control variables are measured using data from the initial listing. For instance, agent experience is measured as the number of homes listed to date, and time controls include year and month dummies for when the home was originally listed.

5 | EMPIRICAL APPROACH

To investigate the impact of social affiliations from church congregation boundaries on agent access to transactions, we use a variety of approaches and specifications, each of which applies the same basic test: for a set of homes which are a given distance away from their listing agent's home, what is the average difference in home value between those which share an affiliation with the agent and those which do not? In other words, our baseline is a home that is a given distance away from the agent's and does not share a congregational affiliation with the agent, while our test is a home that is the same distance away from the agent's and does share a congregational affiliation with the agent.

The first set of specifications treats the data as a cross-section and explores the controlled correlations between affiliations and home listing price. The basic specification is:

$$Y_{ihta} = \alpha + \beta_1 * X_{ih} + \beta_2 * \text{Affiliation}_{ih} + \beta_3 * \text{Experience}_{ih} + \beta_4 * \text{Distance}_{ih} + \gamma_t + \omega_a + \varepsilon_{ihta}$$

where Y_{ihta} is the log of the list price of home h listed by agent i at time t in area a , X_{ih} represents a vector of transaction controls, ω_a is a geographic fixed effect at the zip code level, and γ_t is a vector of time fixed effects (estimated using yearly and monthly dummy variables), which allow us to control for seasonality and macroeconomic factors that determine home value. Affiliation_{ih} is a dummy variable that takes the value of 1 if the home is located in the same ward or stake as the listing agent's home address, and 0 otherwise. Experience_{ih} is a count of the number of homes listed to-date by the listing agent, including home h , and Distance_{ih} is the linear distance between the agent's home and the listed home. We estimate this specification using ordinary least squares (OLS) with standard errors clustered by agent. The second set of models are within-agent models and investigate the impact of social affiliations on home listing price for a given agent. These models are similar to the first set of models but include agent and brokerage fixed effects.

The third set of specifications uses two new independent variables instead of Affiliation_{ih} . They are the log of “# of homes listed for affiliates to date” and the log of “# of homes listed for non-affiliates to date.” The log of list price is regressed on these variables and controls, but only for the subsample of the data which consists of nonaffiliate transactions for the first 3 years an agent has

⁷These “dropped” agents are included in relevant control variables, such as the measures of current brokerage size.

listed homes.⁸ These models investigate how the price of nonaffiliate listings change with the accumulation of each type of agent experience (affiliated or nonaffiliated) in the early stages of the agent's career. The unit of analysis is again the agent/listing, with standard errors clustered by agent, and we run these models both with and without agent and brokerage fixed effects. For all of the models described above, we also run specifications where we interact the variables of interest with a dummy variable for whether the agent works for a major franchise brokerage.

The final models estimate the hazard of entrepreneurship, depending on the number of affiliated homes listed to date as well as controls for time and time since entry. Entrepreneurship is defined as an agent starting a new brokerage that only employs one agent (i.e., themselves). These models investigate how affiliations influence the hazard of entrepreneurship. The basic specification is:

$$\lambda_i(t|X) = \lambda_0(t) * \exp(X_{it}\Gamma)$$

where $\lambda_i(t|X_i)$ is agent i 's hazard of becoming a real estate broker (an entrepreneur in our setting) at time t given covariates X_{it} , t is the time variable, which corresponds to the number of days since agent i 's first listing, and X_{it} is our covariate vector with our variables of interest: “# of homes listed for affiliates to date” and “# of homes listed for nonaffiliates to date”. We also control for the year in which the observation occurs, for whether or not an agent is currently in a franchise brokerage, for agents that have ever been in a franchise brokerage, and for the agent's year of entry into the market. In these models, the failure variable is set to 1 if the agent has opened a new brokerage before the focal listing.

6 | RESULTS

Table 1 provides descriptive statistics for the main variables used in our analyses. The average home in our sample lists for \$256,453, and about 11% of homes are listed by agents that share an affiliation with the home seller. About 43% of agent-year observations are for agents who work for a franchise brokerage. Table 2 provides descriptive statistics by affiliation, including t -tests for differences. The results of this table suggest that when social affiliations are present in a transaction, homes are significantly more expensive (\$248,907 vs. \$316,915) and larger (2,631 vs. 3,129 square feet). Agents who list affiliated homes are less experienced on average. Table 3 presents correlations for the main variables in our analyses.

Figure 1 presents the original list price distributions depending on the presence of an affiliation. It shows that at all levels of original list price, the distribution is shifted to the right for affiliations, suggesting agents list more expensive homes across the distribution of list prices and are not simply gaining access to a few very expensive listings.⁹ Overall, these descriptive statistics suggest that (on average) higher quality and more expensive homes are listed by social affiliates, but that chosen affiliated agents are much less experienced.¹⁰

⁸Three years was chosen for the main models because it is the median time value of agent experience. Supplemental analyses with alternate time windows are included in the Supporting Information.

⁹As this suggests the possibility that agents choose to list affiliated homes at higher prices, we predicted list price based strictly on observable house and area characteristics. Our results are also robust to using sold price, predicted list price, and the ratio of actual to predicted list price as dependent variables.

¹⁰Our results are robust to excluding observations with co-agents as well as for agents who appear to be part-time agents based on yearly listing counts.

TABLE 1 Sample descriptive statistics

Variable	N	Mean	SD	Min	Max
Original list price	45,841	256,453	156,289	68,500	1,200,000
Affiliation	45,841	0.111	0.314	0	1
Ward affiliation	45,841	0.056	0.229	0	1
Stake affiliation	43,480	0.058	0.235	0	1
Number of houses listed to date, agent	45,841	56.372	77.575	1	573
Number of houses listed for nonaffiliates to date, first 3 years	26,872	20.022	25.866	0	213
Number of houses listed for affiliates to date, first 3 years	26,872	2.411	10.469	0	198
Linear distance	45,841	10.074	7.250	0	29.970
Short sale	45,841	0.080	0.271	0	1
Immediate possession	45,841	0.238	0.426	0	1
Co-agent present	45,841	0.232	0.422	0	1
Owner agent	45,841	0.051	0.220	0	1
Franchise brokerage dummy	45,841	0.432	0.495	0	1
Year	45,841	2007	3.665	1998	2014
Month	45,841	6.113	3.241	1	12
Agent entry year	41,788	2004	3.514	1998	2014
Entrepreneurship	41,788	0.163	0.369	0	1
Days since first entry	41,788	1,447.24	1,208.84	0	5,826
Agent ever in franchise brokerage	41,788	0.638	0.481	0	1
Agent currently in franchise brokerage	41,788	0.431	3.514	0	1

TABLE 2 Sample descriptive statistics, by affiliation

Variable	Mean	SD	Mean	SD	t tests
	No affiliation		Affiliation		p-value
Original list price	248,907	150,283	316,915	187,275	.000
Square feet (sqft)	2,630.75	1,300.96	3,128.54	1,439.30	.000
Predicted list price/original list price	0.992	0.179	1.007	0.193	.000
Predicted sold price/original list price	1.053	0.179	1.072	0.176	.000
Sold	0.486	0.500	0.415	0.493	.000
Days on market	127.69	98.56	139.98	122.72	.000
Number of list to date, agent	57.03	78.00	51.14	73.85	.000
Number of list to date, brokerage	1,093.63	1,334.09	1,033.60	1,292.48	.002
Short sale	0.082	0.274	0.060	0.238	.000
Immediate possession	0.244	0.430	0.192	0.394	.000
Co-agent present	0.231	0.422	0.236	0.425	.412
Owner agent	0.047	0.212	0.083	0.276	.000
Franchise brokerage	0.434	0.496	0.413	0.492	.004
	N = 40,754		N = 5,087		

TABLE 3 Correlations for primary variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Original list price	1.00									
(2) Predicted original list price	0.91	1.00								
(3) Affiliation	0.14	0.14	1.00							
(4) Number of houses listed to date, agent	0.04	0.04	−0.02	1.00						
(5) Linear distance	−0.05	−0.04	−0.14	0.02	1.00					
(6) Short sale	0.00	−0.01	−0.03	0.02	0.04	1.00				
(7) Immediate possession	−0.03	−0.04	−0.04	−0.05	0.01	0.01	1.00			
(8) Co-agent present	−0.01	−0.01	0.00	0.05	−0.13	−0.05	0.04	1.00		
(9) Owner agent	0.02	0.03	0.05	−0.02	−0.03	−0.03	0.10	−0.01	1.00	
(10) Franchise brokerage	0.04	0.03	−0.01	0.08	−0.04	0.00	−0.06	−0.01	−0.06	1.00

6.1 | Acquiring higher-value listings

Table 4 presents the results for our examination of the first hypothesis. In Column 1, we first investigate the overall correlation between social affiliations and home list price using cross-sectional between effects models. After controlling for geography, geographical distance, time, agent experience, and transaction characteristics (including whether the house was listed as a short sale and whether the agent owns the listed home), we find that social affiliations are associated with homes listing for 14% more than nonaffiliated homes. In Column 2, this result is robust to

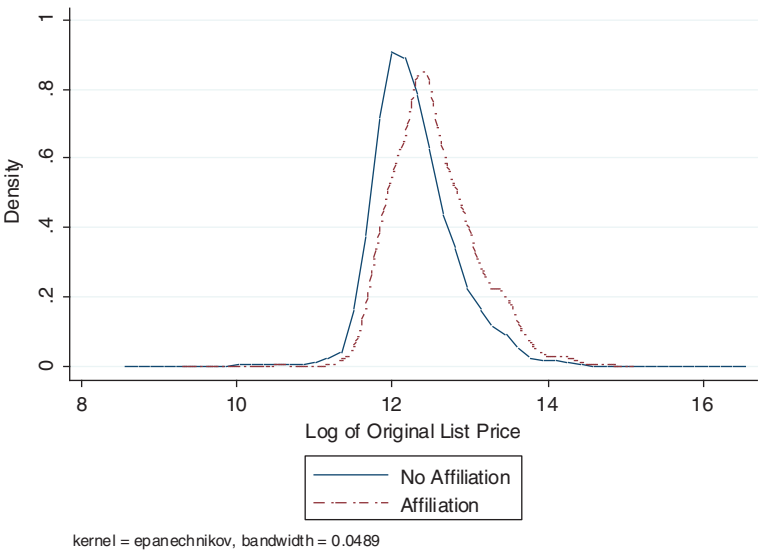


FIGURE 1 Affiliations correlated with higher list prices

TABLE 4 Affiliations lead to higher value listings for agents

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Log(list Price)	Log(list Price)	Log(list Price)	Log(list Price)	Log(list Price)	Log(list Price)	Log(list Price)	Log(list Price)
	ALL	ALL	FIRST 3	FIRST 3	ALL	ALL	ALL	ALL
Affiliation	0.140 (0.007) [<i>p</i> = .000]	0.142 (0.018) [<i>p</i> = .000]	0.132 (0.008) [<i>p</i> = .000]	0.130 (0.018) [<i>p</i> = .000]	0.082 (0.014) [<i>p</i> = .000]	0.124 (0.033) [<i>p</i> = .000]	0.145 (0.008) [<i>p</i> = .000]	0.161 (0.023) [<i>p</i> = .000]
Log(number of houses listed to date)	0.009 (0.001) [<i>p</i> = .000]	0.011 (0.006) [<i>p</i> = .055]	0.013 (0.002) [<i>p</i> = .000]	0.003 (0.009) [<i>p</i> = .018]	0.007 (0.001) [<i>p</i> = .000]	0.011 (0.006) [<i>p</i> = .077]	0.008 (0.004) [<i>p</i> = .000]	0.011 (0.006) [<i>p</i> = .055]
Aff X log(number of houses listed...)					0.019 (0.004) [<i>p</i> = .000]	0.005 (0.013) [<i>p</i> = .680]		
Franchise brokerage							0.036 (0.004) [<i>p</i> = .000]	0.195 (0.153) [<i>p</i> = .204]
Aff X franchise brokerage							−0.008 (0.013) [<i>p</i> = .561]	−0.046 (0.034) [<i>p</i> = .172]
Linear distance	0.001 (0.0003) [<i>p</i> = .066]	0.001 (0.001) [<i>p</i> = .029]	0.001 (0.0004) [<i>p</i> = .117]	0.001 (0.001) [<i>p</i> = .059]	0.001 (0.0003) [<i>p</i> = .122]	0.001 (0.001) [<i>p</i> = .029]	0.001 (0.0003) [<i>p</i> = .040]	0.001 (0.001) [<i>p</i> = .029]
Owner agent	0.019 (0.009) [<i>p</i> = .028]	0.025 (0.013) [<i>p</i> = .047]	0.027 (0.012) [<i>p</i> = .020]	0.026 (0.018) [<i>p</i> = .153]	0.020 (0.009) [<i>p</i> = .017]	0.025 (0.012) [<i>p</i> = .044]	0.023 (0.006) [<i>p</i> = .008]	0.025 (0.012) [<i>p</i> = .044]
Co-agent present	0.013 (0.005) [<i>p</i> = .005]	0.030 (0.009) [<i>p</i> = .001]	0.026 (0.006) [<i>p</i> = .000]	0.038 (0.013) [<i>p</i> = .004]	0.012 (0.005) [<i>p</i> = .006]	0.030 (0.009) [<i>p</i> = .002]	0.013 (0.005) [<i>p</i> = .004]	0.030 (0.009) [<i>p</i> = .001]
Immediate possession	−0.029 (0.004) [<i>p</i> = .000]	−0.025 (0.007) [<i>p</i> = .001]	−0.025 (0.006) [<i>p</i> = .000]	−0.018 (0.010) [<i>p</i> = .058]	−0.029 (0.004) [<i>p</i> = .000]	−0.025 (0.007) [<i>p</i> = .000]	−0.027 (0.004) [<i>p</i> = .000]	−0.025 (0.007) [<i>p</i> = .001]
Short sale	−0.043 (0.008) [<i>p</i> = .000]	−0.043 (0.013) [<i>p</i> = .001]	−0.012 (0.013) [<i>p</i> = .347]	−0.016 (0.021) [<i>p</i> = .443]	−0.043 (0.008) [<i>p</i> = .000]	−0.043 (0.013) [<i>p</i> = 0.001]	−0.043 (0.008) [<i>p</i> = .000]	−0.043 (0.013) [<i>p</i> = .001]
Constant	12.125 (0.015) [<i>p</i> = .000]	12.216 (0.041) [<i>p</i> = .000]	12.213 (0.018) [<i>p</i> = .000]	12.232 (0.097) [<i>p</i> = .000]	12.234 (0.015) [<i>p</i> = .000]	12.218 (0.041) [<i>p</i> = .000]	12.203 (0.015) [<i>p</i> = .000]	12.214 (0.041) [<i>p</i> = .000]

TABLE 4 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Geographic controls	Y	Y	Y	Y	Y	Y	Y	Y
Time controls	Y	Y	Y	Y	Y	Y	Y	Y
Brokerage fixed effects	N	Y	N	Y	N	Y	N	Y
Agent fixed effects	N	Y	N	Y	N	Y	N	Y
R^2	0.319	0.472	0.331	0.533	0.319	0.472	0.320	0.472
Observations	45,841	45,841	26,878	26,878	45,841	45,841	45,841	45,841

Note. Robust standard errors presented in parentheses. Time controls include year and month dummies for home listing date. Geographic controls include zip code dummies.

TABLE 5 Effect of transacting with affiliates on subsequent nonaffiliate transactions, first 3 years

	(1)	(2)	(3)	(4)
Dependent variable	Log(list price)	Log(list price)	Log(list price)	Log(list price)
Subsample	Nonaffiliated transactions	Nonaffiliated transactions	Nonaffiliated transactions	Nonaffiliated transactions
Years	First 3 years	First 3 years	First 3 years	First 3 years
Log (number of homes listed for nonaffiliates to date)	0.004 (0.003) [<i>p</i> = .110]	0.006 (0.011) [<i>p</i> = .598]	−0.010 (0.004) [<i>p</i> = .007]	−0.011 (0.012) [<i>p</i> = .342]
Log(number of homes listed for affiliates to date)	0.03 (0.004) [<i>p</i> = .000]	0.03 (0.012) [<i>p</i> = .010]	0.026 (0.005) [<i>p</i> = .000]	0.029 (0.013) [<i>p</i> = .022]
Franchise brokerage			−0.039 (0.013) [<i>p</i> = .004]	0.016 (0.133) [<i>p</i> = .898]
Log(number of homes listed for NON-AFF) * franchise brokerage			0.027 (0.005) [<i>p</i> = .000]	0.036 (0.012) [<i>p</i> = .004]
Log(number of homes listed for AFF) * franchise brokerage			0.007 (0.008) [<i>p</i> = .348]	−0.003 (0.019) [<i>p</i> = .893]
Linear distance	0.001 (0.0004) [<i>p</i> = .023]	0.001 (0.001) [<i>p</i> = .141]	0.001 (0.0004) [<i>p</i> = .011]	0.001 (0.001) [<i>p</i> = .155]
Owner agent	0.013 (0.013) [<i>p</i> = .326]	0.016 (0.021) [<i>p</i> = .449]	0.014 (0.013) [<i>p</i> = .264]	0.017 (0.021) [<i>p</i> = .425]
Co-agent present	0.028 (0.006) [<i>p</i> = .000]	0.039 (0.014) [<i>p</i> = .005]	0.025 (0.006) [<i>p</i> = .000]	0.039 (0.013) [<i>p</i> = .004]
Immediate possession	−0.020 (0.006) [<i>p</i> = .001]	−0.014 (0.010) [<i>p</i> = .165]	−0.018 (0.006) [<i>p</i> = .003]	−0.014 (0.010) [<i>p</i> = .180]
Short sale	−0.006 (0.013) [<i>p</i> = .637]	−0.011 (0.023) [<i>p</i> = .632]	−0.004 (0.013) [<i>p</i> = .759]	−0.011 (0.023) [<i>p</i> = .643]
Constant	12.237 (0.019) [<i>p</i> = .000]	12.289 (0.096) [<i>p</i> = .000]	12.25 (0.020) [<i>p</i> = .000]	12.332 (0.101) [<i>p</i> = .000]
Geographic controls	Y	Y	Y	Y
Time controls	Y	Y	Y	Y
Brokerage fixed effects	N	Y	N	Y
Agent fixed effects	N	Y	N	Y
<i>R</i> ²	0.321	0.529	0.323	0.529
Observations	23,761	23,761	23,761	23,761

Note. Robust standard errors presented in parentheses, clustered by listing agent.

the inclusion of agent fixed effects, indicating that agents also list homes that are 14% more expensive when they list for affiliates than when they list for nonaffiliates. Columns 3 and 4 show that this effect is similar in the early years of agents' careers. The results in Columns 5 and 6 indicate that more experienced agents do see a higher bump listing for affiliates than less experienced agents, but this experience effect diminishes dramatically and is estimated much less precisely when agent fixed effects are included, thus not appearing to be a within effect. Taken together, these results suggest that agents gain access to higher-value transactions by listing for affiliates,

and that such access even occurs early in an agent's career, when experience is low. This provides strong support for Hypothesis 1.

6.2 | Building reputation through social affiliation

We next turn to the impact of listing for affiliates on entrant agent reputation. Hypothesis 2 predicts that affiliate transactions, which are higher-value on average than nonaffiliate transactions, will have a stronger impact on the reputation of early-career professionals than nonaffiliate transactions. Table 5 presents results from analyses examining the impact of agent experience with affiliate and nonaffiliate listings on the value of future transactions. The results in Columns 1 and 2 show support for Hypothesis 2: the average effect on the log of the number of homes previously listed for affiliates is between four and eight times larger than the coefficient on the log of the number of homes previously listed for nonaffiliates (p -value = .030), which is not precisely estimated in the model with agent and brokerage fixed effects. These results provide evidence that transacting with affiliates has more of an impact on early-career reputation than transactions with nonaffiliates. In Figure S4, we plot results for various time windows at the start of agent careers, ranging from 1 to 5 years, and find consistent results, although the relationship diminishes as the window widens, consistent with Livingston's (2005) finding that later signals have smaller marginal effects on reputation than early signals. These results support our second hypothesis and suggest that listing for affiliates can aid reputation building in a way that listing for nonaffiliates cannot.

Our third hypothesis predicts that listing for social affiliates will have a stronger impact on the building of individual reputation for early-career professionals who work in low-reputation firms than for early-career professionals in high-reputation firms. To examine this prediction, we compare agents who work for major franchise brokerages—which have a strong reputation—with agents who do not. In the final two columns of Table 4, we show that agents averaged across all levels of experience who work in high-reputation brokerages do list higher-value houses on average ($\beta = 3.6\%$, p -value = .000), but they may get less benefit from social affiliations than agents in low-reputation brokerages, though the p -values on the interactions are .561 and .172 for the between and within models, respectively.

In the last two columns of Table 5 we investigate how the effect of the log of nonaffiliated and affiliated homes differs for early-career agents in franchise brokerages from the effect for early-career agents in nonfranchise brokerages. Agents in the latter show the same pattern from our previous analysis: the coefficient on the log of affiliated homes is just under 0.03 for both between and within models, with p -values of .000 and .022, respectively, while the coefficient on the log of nonaffiliated homes is slightly negative and imprecisely estimated in the within model (p -value = .342). Agents in franchise brokerages, however, show a different pattern. The interaction of franchise brokerage with the log of affiliated homes is close to zero and has a relatively high p -value (.348 and .893) in both models, indicating that these agents on average seem to benefit from listing affiliated homes about as much as agents in nonfranchise brokerages. However, the interaction of franchise brokerage with the log of nonaffiliated homes is close to the same size as that of the noninteracted affiliated listing coefficient (about 0.03, with p -values of .000 and .004 in our two specifications). Thus, early-career agents in high-reputation brokerages seem to get equivalent reputation benefits from listing for affiliates and for nonaffiliates, while early-career agents in low reputation brokerages get the largest reputation-building benefits from listing for affiliates. This provides mixed support for Hypothesis 3: while agents in low-reputation firms receive more relative benefit from affiliations (as nonaffiliate

transactions do not significantly build reputation), agents in both high and low-reputation brokerages receive similar reputation-building benefits from the marginal affiliate transaction.

6.3 | Social affiliations and entrepreneurship

Our final hypothesis predicts that transacting with social affiliates will lead to an increase in the likelihood that a service professional engages in entrepreneurship. The results for this hypothesis can be found in the Cox proportional hazard models of Table 6. For these models, our entrepreneurship outcome is when an agent forms his or her own brokerage and serves as the sole agent for that brokerage at its inception. Our time unit is the number of days since the agent's first listing, and the respective *p*-values for the tests of the proportional hazard assumption are found in the penultimate row of the table. Columns 1–3 of Table 6 indicate (as one would expect) that listing more for nonaffiliates is associated with a slight increase in the propensity to engage in entrepreneurship. However, they provide surprising evidence that contradicts Hypothesis 4: listing for affiliates is associated with a significantly *lower* propensity of becoming an entrepreneur. In particular, for a given number of total listings, each additional affiliate listing is associated with about a 6% decline (*p*-value = .03) in the hazard of becoming an entrepreneur. These results are robust to controlling for the number of years of experience for the agent (Column 2) and to fixed effects for the first year of each agent's career (Column 3), thus making this is a within-cohort effect.

In Columns 3–6 of Table 6, we split out agents who work for or have worked for franchise brokerages. For the average agent, regardless of brokerage affiliation, the effects of affiliate and non-affiliate listings are the same as before. Agents who currently work in franchise brokerages are between 75 and 80% less likely on average to start their own brokerages (*p*-value = .000). The benefits they receive from working in these brokerages, including access to firm-level resources such as firm reputation, appear to be very effective in keeping these agents from entering entrepreneurship. They may also lack confidence in their ability to leverage individual reputation to achieve success. However, agents who used to work for franchise brokerages, but no longer do, appear to be much more likely to start their own brokerages (about 37% on average, although the effect is only somewhat precisely estimated, with *p*-values ranging from .056 to .08). These agents seem to have leveraged their time with high-reputation firms to acquire valuable human capital, which they then augmented with the building of individual reputation during their time away from franchise brokerages. This phenomenon could be useful to study in greater detail in future work.

Our entrepreneurship results are surprising given the reputational benefits of social affiliations. It appears that their influence on the entrepreneurship decision is not straightforward. Social capital is naturally limited to the networks to which a professional belongs, and thus may not be fully portable. There are similar limits to the portability of reputation, as a reputation for ability in one area may not carry to another (Greenwood, Li, Prakash, & Deephouse, 2005). This line of reasoning implies that the basis on which reputation is formed and the context to which it is applied may strongly impact effectiveness.

Work by Byun et al. (2018), Campbell et al. (2012), and others suggest our Hypothesis 4 prediction is likely valid under certain circumstances. In particular, we think that in settings where transactions are repeated, the benefits of social capital on the intensive margin—increasing both transaction value and volume—lead to increased entrepreneurship. However, in many service settings transactions are rarely repeated, and transaction volume is purely reflected in the extensive margin (number of clients), which makes the limitations associated with using social capital and the reputation created therefrom particularly problematic. Entrepreneurial professionals must be confident in their

TABLE 6 Affiliations associated with lower incidence of entrepreneurship

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)
	Hazard of Entrepreneurship	Hazard of Entrepreneurship	Hazard of Entrepreneurship	Hazard of Entrepreneurship	Hazard of Entrepreneurship	Hazard of Entrepreneurship
Number of homes listed for affiliates	0.951 (0.025) [<i>p</i> = .060]	0.937 (0.028) [<i>p</i> = .030]	0.940 (0.028) [<i>p</i> = .035]	0.956 (0.026) [<i>p</i> = .095]	0.935 (0.026) [<i>p</i> = .016]	0.939 (0.025) [<i>p</i> = .020]
Number of homes listed for nonaffiliates		1.004 (0.002) [<i>p</i> = .084]	1.005 (0.002) [<i>p</i> = .018]		1.007 (0.002) [<i>p</i> = .003]	1.008 (0.002) [<i>p</i> = .000]
Ever in franchise brokerage				1.374 (0.248) [<i>p</i> = .078]	1.369 (0.246) [<i>p</i> = .080]	1.424 (0.264) [<i>p</i> = .056]
Currently in franchise brokerage				0.168 (0.047) [<i>p</i> = .000]	0.155 (0.043) [<i>p</i> = .000]	0.143 (0.041) [<i>p</i> = .000]
Year dummies	Y	Y	Y	Y	Y	Y
Entry year dummies	N	N	Y	N	N	Y
Log Pseudolikelihood	−1,046.38	−1,045.11	−1,024.47	−1,016.21	−1,012.48	−990.24
<i>p</i> -value for test of proportional hazards	.357	.582	.369	.051	.227	.148
Observations	35,632	35,632	35,632	35,632	35,632	35,632

Note: Unit of time is the days since first observed agent sale. Robust standard errors presented in parentheses. Results using log of number of homes listed for affiliates are similar to those shown. *p*-values relating to tests for the proportional hazard assumption are presented in the penultimate row of each column.

individual reputations and the ability of their networks to provide word-of-mouth referrals in order to generate transactions. If service professionals do not consider their social capital or reputation to be powerful enough to sustain a separate enterprise these resources will not influence the entrepreneurial decision in a positive way. Thus, not reaping reputational benefits on the extensive margin in these settings in future transactions could be causing the negative impact of reliance on social affiliations on the entrepreneurship decision that we find.¹¹ Ultimately, additional work is needed to understand how social capital can both encourage and hinder entrepreneurship.

6.4 | Robustness and alternative explanations

To increase confidence in our results, we ran a variety of robustness checks and investigated potential alternative explanations. First, to ensure that our main results were capturing transaction value as it relates to the quality of the homes listed rather than an artificial determination of value due to factors such as the agent's influence on the listing price, we performed the same analyses as those found in Table 4 using different dependent variables. The first set of analyses, found in Table S1 (analogous to Table 4), use the listed homes' square footage as the dependent variable. The second set of analyses, found in Table S2, use three alternative dependent variables: sale price, predicted list price as a function of all home characteristics, and the ratio of actual to predicted list price. All analyses produce results that are similar to our primary analyses, and the analysis in column three indicates that agent pricing behaviors are not significantly influence the results.

Given the geographic nature of the social affiliations we examine in this study, an important distinction needs to be made empirically between the benefits of co-location and the benefits of social affiliations. To separate these effects, we analyzed subsamples of our data in which the listed home was within a given distance of the listing agent's home address, starting at 0.25 miles and increasing by that increment up to 3.0 miles. Figures S2 and S3 plot the coefficients on affiliation and their 95% confidence intervals for all agents and entrant agents only, respectively, along with bar graphs indicating the number of observations in each subsample. It is noteworthy that only a small fraction of total listings lie within a short distance of the agent's home, with the number of observations within three miles representing just 8,547 of our 45,841 total observations. Thus, a significant majority of listings go to agents who do not live nearby. Within 0.5 miles of the agent's home, there is no strong evidence of affiliation benefits beyond those of co-location. However, expanding the circle from 0.5 to 0.75 miles shows a dramatic jump in both the strength of the affiliation benefit and the precision of the estimate, and this benefit remains largely the same in terms of magnitude and precision up to 3.0 miles. Thus, although there do appear to be co-location benefits to agents in listing homes, there remains strong evidence for the benefits of social affiliations. As a separate test, we reran our base analyses from Table 4 substituting distance-band dummy variables for our linear distance measure, allowing for the possibility that the effect of distance is not properly controlled for with a linear

¹¹There are additional factors that also can negatively influence the entrepreneurship decision in settings with nonrepeated transactions. First, the additional efforts required to maintain and service the pool of social affiliates (Gubler, 2019) can decrease the ability of a service professional entrepreneur to build a sufficient non-affiliate pool to sustain an independent firm. Thus, the benefit professionals receive from resources provided by a larger firm (e.g., brand equity), which allow them to increase the size of their nonaffiliate pool, may be even larger for professionals who lean heavily on transactions with social affiliates than for those who do not. Second, while entrepreneurs often start their own firms to gain access to opportunities that are not available to them in employment (Aldrich & Zimmer, 1986; Granovetter, 1973), social affiliations may actually reduce these benefits. Nonpecuniary motivations in professional services are likely less rooted in autonomy and more likely rooted in the satisfaction of owning one's own firm or enjoyment from choosing one's own colleagues, which may be reduced if a professional is finding success working with social affiliates.

variable and creating a more direct comparison within-distance. The results are found in Table S3 and are quantitatively and qualitatively similar to our base results.

If a large proportion of agents live in higher-price areas, this could mechanically lead to affiliations being positively correlated with listing price. To explore this possibility, we ran quantile regressions of list price at the 10th, 25th, 50th, 75th, and 90th percentiles on our variables of interest and controls. The results are shown in Table S4. The effects at every level of the distribution show a strong positive relationship between the presence of an affiliation and listing price. Thus, even in areas at the low end of the price distribution, agents list higher-priced houses when they list for affiliates than when they do not. This relationship strengthens at higher levels of price distribution, consistent with the increased importance of trust at higher levels of value (Li, Eden, Hitt, & Ireland, 2008).

In addition to quantile regressions, we also reran our main analyses in Tables 4 and 5 using more granular ward and stake affiliation measures. The results from these analyses are in Tables S5 and S6. In general, ward affiliations increase transaction value slightly more (4–7% in the fixed effects models) than stake affiliations, even for early-career agents. This difference could reflect differences in the benefits of relational (ward) and structural (stake) social capital. In Table S6, we examine whether there are differential benefits to reputation from each type of listing. The fixed-effect regressions in Column 2 indicate there may be a slightly higher benefit from stake listings, but it is difficult to draw conclusions given the added granularity of the social affiliation measures we use and the low degree of variation in ward listings we see from early-career agents. Finally, we ran our base value models including stake fixed effects to control for the quality of an area. The results are presented in Column 4 of Table S2 and are similar to our core results.

Yearly performance and survival are both important to understanding the overall impact of social affiliations on the careers of service professionals. In Table S8, we provide the results of Cox proportional hazard models for agent exit, and in Table S9, the results from OLS regressions of the log of yearly sales performance on the number of affiliate and nonaffiliate listings. We find that the number of affiliate listings is associated with a slight increase in the hazard of exit, although the result is small and not robust. For the performance results, we find that more affiliate listings are associated with an increase in yearly performance. However, the marginal effect diminishes as the number of affiliated transactions increase (eventually even becoming negative). These results suggest that social affiliations can be performance-enhancing for agents, so long as social capital is not overmined. Both of these results warrant deeper investigation in future studies.

There are a number of limitations remaining to this study. First, while our setting allows us to improve upon the endogeneity problem encountered in many network or social capital studies (which is inherent from individuals choosing who to affiliate with Mouw (2006)), the affiliations in this study may not always be truly exogenous. Agents chose where to live, and agents and clients choose whether or not to engage in a transaction together. That said, both wards and stakes in Utah cover small areas geographically; thus, while individuals may target specific wards or stakes in which they would like to live, the likelihood of finding an available home in the ward or stake of their choice is quite low. Second, we are unable to measure the strength of affiliation (aside from the ward vs. stake comparisons), or to identify which individuals are members of the Church of Jesus Christ of Latter-day Saints (although 90% of individuals in Utah County self-report belonging to the church). Finally, while the data include numerous elements that give insight into the selection process, many individual-level characteristics are unobserved. This includes social affiliations in addition to church congregations, which likely exist and may also be influencing our results.

7 | DISCUSSION AND CONCLUSION

For service professionals and other providers of credence goods, overcoming challenges related to incomplete information to increase performance is a first-order problem. These providers achieve success by using every resource at their disposal to increase transaction volume and value. This article has presented theory and evidence of how service professionals use social affiliations to engage in valuable transactions and develop reputation. The results suggest that affiliations allow agents to engage in higher-value transactions despite low levels of experience. More strikingly, the results suggest that transacting with social affiliates positively impacts the ability of early-career agents to engage in valuable transactions with future nonaffiliates, implying that agents can leverage affiliations to build reputation, which particularly benefits early-career agents in low-reputation firms. Finally, contrary to our theory, we find that agents who list more homes for social affiliates are less likely to become entrepreneurs.

Our empirical setting lends itself both to benefits and to drawbacks. The social affiliations we examine are exogenous assignments to church congregations. This allows us ostensibly to hold all other forms of affiliation and embeddedness constant (mainly through our distance measure) and to focus on one type of formal affiliation to test its influence in our setting. However, our setting also includes another source of affiliation, shared church membership, which is not exogenous and which is naturally correlated with our focal measure. It is possible that this correlation is causing us to capture the effects from two sources of embeddedness—structural and cultural—which may be contributing to what we observe. The question as to the precise mechanism driving the effects would be better answered by a comparison between our setting and one in which there is only one prevalent formal source of affiliation, but our data do not allow us to do so. Furthermore, social affiliations generally are not exogenous, and their endogeneity can have an impact on their ability to aid firms and individuals in accessing valuable transactions.¹² The effects of variation in costliness of affiliation on signals of trustworthiness are an interesting question that to our knowledge remains open.

Professional services are an important industry on their own, especially in light of the shift of developed nations to service-based economies, but our theory is applicable in any industry where consumers struggle to identify trustworthy and capable providers and the market is in danger of breaking down due to asymmetric information (Akerlof, 1970). Overcoming these problems is a necessity for firms—especially entrants—to successfully compete (Barney & Hansen, 1994). Social capital can be used as a means for entrants to build reputation and establish themselves in the marketplace. While residential real estate may be on the boundary for professional service industries, largely due to the nonrepeated nature of transactions, their relatively large value, and the ability of consumers to bypass professionals and do the work themselves, we believe this is a conservative setting and these aspects of the setting should weaken the effects we hypothesize. Ultimately, however, work in additional settings would be useful to test generalizability.

Theoretically, this article makes a few key contributions. First, our findings suggest social capital can increase both the volume and value of transactions. Adler and Kwon (2002) argued that social capital provides access to resources, and its value is determined by the value of the resources to which it provides access. In our setting, the largest benefits from affiliations accrue to agents that have social affiliations in expensive areas. This suggests that future work should continue to focus

¹²For example, if club members think an attorney has joined their club simply to generate business for his or her firm, they may not use club membership as a signal of trustworthiness, which would then reduce the positive impact of affiliation on the attorney's transaction value.

on the value of social capital based on the resources to which it connects, as this can directly influence performance.

Second, the results of this article provide some evidence against the argument that firms will experience negative outcomes from social capital. This has been hypothesized to occur (especially in markets where information is incomplete, e.g., DiMaggio & Louch, 1998) if social pressures and preferences lock firms into less valuable transactions, effectively relegating them to a “relief organization” (e.g., Granovetter, 1985; Uzzi, 1997). The results of this article suggest instead that strong social affiliations provide access to the most valuable transactions. However, our performance results indicate the possibility that social connections can lead to downsides for agents if they over-rely on such transactions. Understanding the mechanisms driving both of these results is a promising area for future research.

The third contribution stems from examining reputation-building and the interplay of individual and firm reputation. Research has shown how events and decisions early in an individual's career have long-term implications for career outcomes (e.g., Briscoe & Kellogg, 2011; Chattopadhyay & Choudhury, 2017; Sørensen, 2004). Our study provides another piece of evidence in this regard, showing how reputation is built through early-career transactions. Early-career agents in high-reputation firms appear to benefit less than agents in low-reputation firms from affiliate listings, and they benefit more from nonaffiliate listings. In fact, the benefits they get from each type of listing are equal, possibly suggesting the impact of firm reputation is stronger than that of social affiliation and individual reputation. Nevertheless, the results for agents in low-reputation firms suggest social capital provides an additional avenue through which professional reputation can be built, potentially leading to important entry and competition benefits. This tradeoff, and the possibility that firm reputation can overshadow individual reputation and the benefits of social capital for early-career professionals, should be investigated further. Additional work should likewise focus on the challenges associated with building reputation through both avenues and on their potential path dependence implications.

Our theory and results also apply strategic lenses to credence goods markets (Darby & Karni, 1973), which are defined by the inability of consumers to identify independently either the degree to which they demand the good or the degree to which it has been provided to them. The remarkable level of asymmetric information in these markets provides excellent opportunities for firms to engage in strategic behavior to create and capture value. However, asymmetric information and the possibility for strategic behavior by firms also create challenges in engaging and reassuring clients. In this article, we find social affiliations provide reassurance to consumers, enabling providers to capture value and improve performance. Future work should build on existing nascent work in this area (e.g., Dulleck et al., 2011; Gubler, 2019) to further understand human capital development, strategic positioning, and how structural and relational social capital can lead to advantages.

Finally, this research derives important implications for entrepreneurship in credence good markets. Our results suggest that reliance on social affiliations can reduce entrepreneurial activity in spite of the benefits they provide. Thus, while affiliations provide increased opportunity via access to transactions, there can be unexpected downsides for markets and the economy. Unpacking this further, including boundary conditions and mechanisms, is an intriguing avenue for future research.

This article likewise has important implications for practitioners and managers. First, this study suggests that firms can potentially leverage trust from social affiliations to enter crowded or competitive markets and build reputation quickly. Second, these results suggest that allowing service experts to transact with socially affiliated clients can lead to significant performance benefits for firms. Instead of creating a “relief organization” (Uzzi, 1997), these affiliations provide key advantages to firms that can be leveraged as a resource to improve performance. Finally, this study suggests that

sustained performance differences between firms in service industries may be driven, at least in part, by social affiliations between employees and clients, including at early stages of the career.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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